

**Concrete Batching Plants
Monitoring Programme
Annual Report
2013-2014**

Technical Report 2014-75

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Executive summary

This report is the Annual Report for the period July 2013-June 2014 by the Taranaki Regional Council on the monitoring programme associated with resource consents held by Firth Industries (Glover Road, Hawera), Allied Concrete (Mould Street, Waitara) and Fletcher Concrete and Infrastructure Limited (Mountain Road, Stratford). These companies operate concrete batching plants.

Firth Industries (a division of Fletcher Concrete and Infrastructure Limited) operates a concrete batching plant located on Glover Road Hawera, in the Tangahoe catchment. The site operation involves mixing of cement, aggregate, water and additives in concrete mixing trucks for delivery to end users, and recently it has been used as a satellite plant. The site also stores aggregate, sand, and builders mix for retail.

Firth Industries holds one resource consent, which includes a total of seven conditions setting out the requirements that the Company must satisfy. The consent allows for the discharge of treated wastewater into land and into an unnamed tributary of the Tawhiti Stream.

During the year under review, Firth demonstrated a high level of environmental performance with its resource consent.

Allied Concrete operates a concrete batching plant located on Mould Street, Waitara, in the Waitara catchment. The site operation includes the storage of aggregate, sand, and builders mix.

Allied Concrete holds one resource consent, which includes a total of four conditions setting out the requirements that the Company must satisfy. The consent allows for the discharge of wastewater into an unnamed tributary of the Waitara River.

During the year under review, Allied Concrete demonstrated a high level of environmental performance with its resource consent.

Fletcher Concrete and Infrastructure Limited operates a concrete batching plant and pre-cast manufacturing plant, including storage and retail of concrete products, on a site just north of Stratford on State Highway 3. This concrete batching site has been added to the Concrete Batching Plants Monitoring Programme. Previously the site was part of the Kahouri Catchment Monitoring Programme. The operation is run by two divisions of Fletcher Concrete and Infrastructure Limited – Firth Industries and Humes Pipeline Systems. Activities at the site include the mixing of aggregate, cement, water, and additives in a concrete truck mixing bowl in order to produce concrete which is then delivered to the end user. The Humes operation involves the manufacturing of pre-cast drainage soak-holes and lids, offal hole lids, and troughs. The Humes operation is also a sales depot for items manufactured both on and off the site.

Fletcher Concrete and Infrastructure Limited holds one consent, which includes a total of 13 conditions setting out the requirements that the Company must satisfy. The consent allows for discharge of stormwater and wastewater into an unnamed tributary of the Kahouri Stream.

During the year under review, Fletcher Concrete and Infrastructure Ltd demonstrated a high level of environmental performance with its resource consent.

The Council's monitoring programme for the July 2013 to June 2014 monitoring period included one inspection of each site. No samples were collected from the sites during the monitoring period.

During the year, the companies all demonstrated a high level of both environmental and administrative performance and compliance with the resource consents. There were no incidents recorded for any of the sites during the 2013-2014 year.

This report includes recommendations for the 2014-2015 year.

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1. Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This report is the Annual Report for the period July 2013 June 2014 by the Taranaki Regional Council on the monitoring programme associated with resource consents held by Firth Industries (Glover Road, Hawera), Allied Concrete (Mould Street, Waitara) and Fletcher Concrete, and Infrastructure Limited (Mountain Road, Stratford). These companies operate concrete batching plants.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by Firth Industries, Allied Concrete, and Fletcher Concrete that relate to discharges of water within the Tangahoe, Waitara, and Patea catchments respectively.

One of the intents of the *Resource Management Act 1991* (RMA) is that environmental management should be integrated across all media, so that a consent holder's use of water, air, and land should be considered from a single comprehensive environmental perspective. Accordingly, the Taranaki Regional Council generally implements integrated environmental monitoring programmes and reports the results of the programmes jointly. This report discusses the environmental effects of Firth Industries, Allied Concrete's and Fletcher Concrete's use of water, land, and air, and is the 9th combined annual report by the Taranaki Regional Council for the Companies.

1.1.2 Structure of this report

Section 1 of this report is a background section. It sets out general information about compliance monitoring under the RMA and the Council's obligations and general approach to monitoring sites through annual programmes, the resource consents held by Firth Industries, Allied Concrete and Fletcher Concrete in the Tangahoe, Waitara, and Patea catchments, the nature of the monitoring programme in place for the period under review, and a description of the activities and operations conducted at the Companies' sites.

Section 2 presents the results of monitoring during the period under review, including scientific and technical data.

Section 3 discusses the results, their interpretation, and their significance for the environment.

Section 4 presents recommendations to be implemented in the 2014-2015 monitoring year.

A glossary of common abbreviations and scientific terms, and a bibliography, are presented at the end of the report.

1.1.3 The Resource Management Act 1991 and monitoring

The *Resource Management Act 1991* (RMA) primarily addresses environmental `effects' which are defined as positive or adverse, temporary or permanent, past, present or future, or cumulative. Effects may arise in relation to:

- (a) the neighbourhood or the wider community around a discharger, and may include cultural and socio-economic effects;
- (b) physical effects on the locality, including landscape, amenity and visual effects;
- (c) ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
- (d) natural and physical resources having special significance (eg, recreational, cultural, or aesthetic);
- (e) risks to the neighbourhood or environment.

In drafting and reviewing conditions on discharge permits, and in implementing monitoring programmes, the Taranaki Regional Council is recognising the comprehensive meaning of 'effects' inasmuch as is appropriate for each activity. Monitoring programmes are not only based on existing permit conditions, but also on the obligations of the RMA to assess the effects of the exercise of consents. In accordance with section 35 of the RMA, the Council undertakes compliance monitoring for consents and rules in regional plans, and maintains an overview of the performance of resource users and consent holders. Compliance monitoring, including both activity and impact monitoring, enables the Council to continually re-evaluate its approach and that of consent holders to resource management and, ultimately, through the refinement of methods and considered responsible resource utilisation, to move closer to achieving sustainable development of the region's resources.

1.1.4 Evaluation of environmental performance

Besides discussing the various details of the performance and extent of compliance by the consent holder/s during the period under review, this report also assigns a rating as to each Company's environmental and administrative performance.

Environmental performance is concerned with actual or likely effects on the receiving environment from the activities during the monitoring year.

Administrative performance is concerned with the Company's approach to demonstrating consent compliance in site operations and management including the timely provision of information to Council (such as contingency plans and water take data) in accordance with consent conditions.

Events that were beyond the control of the consent holder and unforeseeable (i.e. a defence under the provisions of the RMA can be established) may be excluded with regard to the performance rating applied. For example loss of data due to a flood destroying deployed field equipment.

The categories used by the Council for this monitoring period, and their interpretation, are as follows:

Environmental Performance

- **High** No or inconsequential (short-term duration, less than minor in severity) breaches of consent or regional plan parameters resulting from the activity; no adverse effects of significance noted or likely in the receiving environment. The Council did not record any verified unauthorised incidents involving significant environmental impacts and was not obliged to issue any abatement notices or infringement notices in relation to such impacts.
- **Good** Likely or actual adverse effects of activities on the receiving environment were negligible or minor at most. There were some such issues noted during monitoring, from self reports, or in response to unauthorised incident reports, but these items were not critical, and follow-up inspections showed they have been dealt with. These minor issues were resolved positively, co-operatively, and quickly. The Council was not obliged to issue any abatement notices or infringement notices in relation to the minor non-compliant effects; however abatement notices may have been issued to mitigate an identified potential for an environmental effect to occur.

For example:

- High suspended solid values recorded in discharge samples, however the discharge was to land or to receiving waters that were in high flow at the time;
- Strong odour beyond boundary but no residential properties or other recipient nearby.
- **Improvement required** Likely or actual adverse effects of activities on the receiving environment were more than minor, but not substantial. There were some issues noted during monitoring, from self reports, or in response to unauthorised incident reports. Cumulative adverse effects of a persistent minor non-compliant activity could elevate a minor issue to this level. Abatement notices and infringement notices may have been issued in respect of effects.
- **Poor** Likely or actual adverse effects of activities on the receiving environment were significant. There were some items noted during monitoring, from self reports, or in response to unauthorised incident reports. Cumulative adverse effects of a persistent moderate non-compliant activity could elevate an 'improvement required' issue to this level. Typically there were grounds for either a prosecution or an infringement notice in respect of effects.

Administrative compliance

- **High** The administrative requirements of the resource consents were met, or any failure to do this had trivial consequences and were addressed promptly and co-operatively.
- **Good** Perhaps some administrative requirements of the resource consents were not met at a particular time, however this was addressed without repeated interventions from the Council staff. Alternatively adequate reason was provided for matters such as the no or late provision of information, interpretation of 'best practical option' for avoiding potential effects, etc.

- **Improvement required** Repeated interventions to meet the administrative requirements of the resource consents were made by Council staff. These matters took some time to resolve, or remained unresolved at the end of the period under review. The Council may have issued an abatement notice to attain compliance.
- **Poor** Material failings to meet the administrative requirements of the resource consents. Significant intervention by the Council was required. Typically there were grounds for an infringement notice.

For reference, in the 2013-2014 period, 60% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 29% demonstrated a good level of environmental performance and compliance with their consents.

1.2 Process description

1.2.1 Firth Industries

Firth Industries, a Division of Fletcher Concrete and Infrastructure Limited, operates concrete batching plant on a site at Glover Road, Hawera.

The operation primarily involves the mixing of aggregate, cement, water and additives in a concrete truck mixing bowl in order to produce concrete which is then delivered to the end user. Builders mix and aggregate are retailed from the site.

A concreting operation has been established on the site since at least 1967. Firth Industries have been operating at the site since the 1980s.

Wastewater on the site consists of stormwater from around the concrete batching plant, and water from washing the concrete trucks. Therefore, the wastewater typically contains some cement deposits and other sediments. Wastewater is treated in a 3-pond settling system. Water is recycled from the third pond for use in truck washing and in the concrete making process.

Sludge from the settling ponds is removed periodically and stored on-site to dry. Waste concrete is also dumped at the site and is made into large blocks which are on-sold to farmers and local contractors.



Photo 1 Location of Firth Industries site, Glover Road, Hawera

1.2.2 Allied Concrete

Allied Concrete operates a concrete batching plant on a site at Mould Street, Waitara. The operation primarily involves the mixing of aggregate, cement, water, and additives in a concrete truck mixing bowl in order to produce concrete which is then delivered to the end user.

Wastewater on the site consists of stormwater from around the concrete batching plant and water from washing the concrete trucks. Therefore, the wastewater typically contains some cement deposits and other sediments. Wastewater is treated in a 4-pond settling system. Water is recycled from the fourth pond for use in truck washing and in the concrete making process.

Sludge from the settling ponds is removed periodically and stored on-site to dry. Waste concrete is also dumped at the site and is made into large blocks which are sold to farmers and local contractors.



Photo 2 Location of Allied Concrete site, Mould Street, Waitara

1.2.3 Fletcher Concrete and Infrastructure Limited

Fletcher Concrete and Infrastructure Limited operates a concrete batching plant and pre-cast manufacturing plant, including storage and retail of concrete products, on a site just north of Stratford on State Highway 3 (Mountain Road). The site is run by two divisions of Fletcher Concrete and Infrastructure Limited – Firth Industries and Humes Pipeline Systems.

This concrete batching site operated by Fletcher Concrete and Infrastructure Limited has been added to the Concrete Batching Plants Monitoring Programme. Previously the site was part of the Kahouri Catchment Monitoring Programme. However, catchment scale monitoring is no longer required and it was recommended that the Fletcher Concrete site be amalgamated into another existing program, such as that presently in place for other concrete plants in the region.

The Firth Industries operation primarily involves the mixing of aggregate, cement, water, and additives in a concrete truck mixing bowl in order to produce concrete which is then delivered to the end user. The Humes operation involves the manufacturing of pre-cast drainage soak-holes and lids, offal hole lids, and troughs. The Humes operation is also a sales depot for items manufactured both on and off the site. The business has operated on the site since 1939.

A tributary of the Kahouri Stream runs under the plant site. Washwater from the plant is treated by settlement in two small ponds, followed by soakage in two stone-

filled pits. Concrete truck washings are treated separately by settlement in two small ponds in series, followed by two soakage ponds. Washwater may be re-circulated from the fourth pond to increase residence time for settling. Discharges to the stream tributary can occur from both soakage systems. During the 2000-2001 monitoring period the third settling pond was relocated adjacent to the other two ponds. The area around the ponds was fully fenced, and the intention was to start recycling the water from the ponds, once the soakage to groundwater from the new pond had stopped.

Sludge from the settling ponds is removed periodically and stored on-site to dry. Waste concrete is also dumped at the site. Local farmers take the dry material for use as fill material and in driveways.

Stormwater from yard areas and the roof of the main building currently soaks to ground or drains through soak holes or grit interceptors before discharging to the unnamed tributary of the Kahouri Stream.

Fletcher Concrete & Infrastructure proposes to upgrade the existing stormwater and wastewater management system, as follows:

- Additional wastewater from the Humes pre-cast pipe manufacturing plant is to be directed to the concrete batching plant wastewater pond and settling system;
- The provision for recycling of truck wash, batching plant and pipe manufacturing wastewater, including two new wastewater holding tanks with the combined capacity of 45,000 litres; and
- Two new sludge drying bins and a concrete mould area to be fully contained with wastewater being directed to the truck wash out wastewater settling area.



Photo 3 Fletcher Concrete site (Firth Industries and Humes Pipeline systems), Stratford

1.3 Resource consents

1.3.1 Water discharge permit

Section 15(1)(a) of the RMA stipulates that no person may discharge any contaminant into water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national regulations.

Allied Concrete holds water permit **1273-3** to cover the discharge of up to 6 cubic metres/day of washwater from a concrete batching plant site into an unnamed tributary of the Waitara River. This permit was issued by the Taranaki Regional Council on 14 November 1996 under Section 87(d) of the RMA. It is due to expire on 1 June 2015.

There are 4 special conditions attached to this consent.

Condition 1 relates to maintenance and operation of the silt control system.

Condition 2 relates to the mixing zone and discharge effects.

Condition 3 relates to concentration limits in the discharge.

Condition 4 states that the Council may review any or all conditions of the consent.

A copy of the permit is attached to this report in Appendix I.

Firth Industries holds water permit **1274-3** to discharge treated wastewater from a concrete batching plant via settling ponds onto and into an unnamed tributary of the Tawhiti Stream in the Tangahoe catchment. This permit was issued by the Taranaki Regional Council on 14 July 2010 under Section 87(d) of the RMA. It is due to expire on 1 June 2028.

There are 7 special conditions attached to consent 1274-3.

Condition 1 requires the consent holder to adopt the best practicable option.

Condition 2 states that the discharge must not exceed 2m³ per day.

Condition 3 requires all washwater to be directed for treatment prior to discharge.

Condition 4 requires the consent holder to maintain the treatment system and ensure retention time is adequate to meet requirements of conditions 5 and 6.

Condition 5 states limits for suspended solids and oil and grease.

Condition 6 relates to mixing zone and effects.

Condition 7 states that the Council may review any or all conditions of the consent.

A copy of the permit is attached to this report in Appendix I.

Fletcher Concrete and Infrastructure Limited hold discharge permit **5026-2** to discharge stormwater and wastewater from a concrete product and manufacturing storage site onto and into land and into an unnamed tributary of the Kahouri Stream in the Patea Catchment. This permit was issued on 7 May 2009 under Section 87(d) of the RMA. It is due to expire on 1 June 2028.

There are 13 special conditions attached to this consent.

Condition 1 requires the consent holder to adopt the best practicable option.

Condition 2 states the maximum stormwater catchment area.

Condition 3 states the maximum wastewater volume discharged per day.

Condition 4 requires the stormwater and wastewater system to be as indicated in consent application.

Condition 5 requires bunding of all above ground hazardous substance storage areas.

Condition 6 states that the discharge after reasonable mixing shall not give rise to pH outside of the allowed range.

Condition 7 states limits for suspended solids, total recoverable hydrocarbons, and chloride.

Condition 8 relates to the mixing zone and discharge effects.

Condition 9 relates to contingency planning.

Condition 10 requires the consent holder to maintain a stormwater management plan.

Condition 11 requires the consent holder to notify the Council prior to making any changes to processes or operations which may alter the discharge.

Condition 12 relates to consent lapse.

Condition 13 states that the Council may review any or all conditions of the consent.

A copy of the permit is attached to this report in Appendix I.

1.3.2 Air discharges

Section 15(1)(c) of the RMA stipulates that no person may discharge any contaminant from any industrial or trade premises into air, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations.

Firth Industries and Fletcher Concrete hold certificates of compliance for discharges to air as a permitted activity.

Allied Concrete does not hold a permit for the discharge to air as it meets the requirements of Rule 16 of the Regional Air Quality Plan for Taranaki as a permitted activity.

1.4 Monitoring programme

1.4.1 Introduction

Section 35 of the RMA sets out obligation/s upon the Taranaki Regional Council to gather information, monitor, and conduct research on the exercise of resource consents, and the effects arising, within the Taranaki region and report upon these.

The Taranaki Regional Council may therefore make and record measurements of physical and chemical parameters, take samples for analysis, carry out surveys and inspections, conduct investigations, and seek information from consent holders.

The monitoring programme for the Firth Industries, Allied Concrete and Fletcher Concrete site consisted of two primary components.

1.4.2 Programme liaison and management

There is generally a significant investment of time and resources by the Taranaki Regional Council in on-going liaison with resource consent holders over consent conditions and their interpretation and application, in discussion over monitoring requirements, preparation for any reviews, renewals, or new consents, advice on the Council's environmental management strategies and the content of regional plans, and consultation on associated matters.

1.4.3 Site inspections

During the monitoring period, Firth Industries, Allied Concrete and Fletcher Concrete were visited twice in accordance with their annual inspection schedule. With regard to consents for the discharge to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and process wastewaters. Air inspections focused on plant processes with associated actual and potential emission sources and characteristics, including potential odour, dust, noxious or offensive emissions. Sources of data being collected by the consent holder were identified and accessed, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council. The neighbourhood was surveyed for environmental effects.

2. Results

2.1 Water

2.1.1 Inspections

Firth Industries (Hawera)

14 January 2014

The bunded areas were all satisfactory; no stormwater was leaving the site. The load out area was in use at the time of inspection. No stormwater was escaping this area. The truck wash area looked to be working well. The settling ponds at the truck wash area were full with a small clear discharge to the drain. There was some evidence of fines in the drain due to recent rain and the pump having broken down which was being repaired. The slurry area at the back of the yard was full which would need to be emptied soon. The main drain through the yard had been cleaned out. Overall the site looked to be well maintained and managed at the time of inspection.

Allied Concrete (Waitara)

27 January 2014

Batches were being loaded out at the time of inspection. The settling ponds at the front of the yard appeared to be working well with no discharge to the drain. The bunded area looked to be well managed with nothing having escaped this area. The back of the yard was in good order with nothing having escaped this area. The aggregate separating area looked tidy with nothing having escaped this area. There was minimal tracking outside of the yard. Overall the site looked to be well managed and maintained at the time of inspection.

Fletcher Concrete (Firth Stratford)

14 January 2014

The batching area was very tidy with any runoff directed to the aggregate and sand trap. It had recently been cleaned out and was working very well. The stormwater that discharges from the soak holes to the drain was clear. The truck wash area and associated ponds were in good order and the water in the last pond was clear. The site was reasonably busy with a load leaving at the time of inspection. Overall the site was tidy and looked to be well managed at the time of inspection.

2.1.2 Results of discharge monitoring

Discharge monitoring undertaken at Firth Industries, Allied Concrete or Fletcher Concrete during the 2013-2014 monitoring period found that there was no evidence of a contaminated discharge occurring during inspection of the sites. The stormwater in the three soak holes was clear.

There appeared to have been some overflow discharge from sink holes at the Fletcher Concrete site at some stage, these had been pumped out soon after the inspection. There had appeared to be no environmental effect from this.

2.1.3 Results of receiving environment monitoring

No sampling of the receiving waters was undertaken, as there were no or only clear discharges, and no indications of adverse effect in receiving waters.

2.2 Air

2.2.1 Inspections

Many industries emit dust from various sources during operational periods. During site inspections the plants were checked for discharges to air. There were no issues with dust at any of the sites during the compliance monitoring period. Rule 16 of the Regional Air Quality Plan sets out various requirements for the environmental performance of concrete plants in respect of discharge to air. These were being met at each site.

2.3 Investigations, interventions, and incidents

The monitoring programme for the year was based on what was considered to be an appropriate level of monitoring, review of data, and liaison with the consent holder. During the year matters may arise which require additional activity by the Council for example provision of advice and information, or investigation of potential or actual causes of non-compliance or failure to maintain good practices. A pro-active approach that in the first instance avoids issues occurring is favoured.

The Taranaki Regional Council operates and maintains a register of all complaints or reported and discovered excursions from acceptable limits and practices, including non-compliance with consents, which may damage the environment. The Unauthorised Incident Register (UIR) includes events where the company concerned has itself notified the Council. The register contains details of any investigation and corrective action taken.

Complaints may be alleged to be associated with a particular site. If there is potentially an issue of legal liability, the Council must be able to prove by investigation that the identified company is indeed the source of the incident (or that the allegation cannot be proven).

In the 2013-2014 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with the company's conditions in resource consents or provisions in Regional Plans.

3. Discussion

3.1 Discussion of site performance

Firth Industries

The Firth Industries site at Hawera was generally well managed. The site was mainly used as a satellite plant. The recycling ponds appeared to be working effectively and were only filled with clear rainwater. Overall a high level of both environmental and administrative performance and compliance was achieved throughout the 2013-2014 monitoring period.

Allied Concrete

The Allied Concrete Site at Waitara was generally well managed. The settling ponds had been well maintained and bunding areas were in effective working order. Overall a high level of both environmental and administrative performance and compliance was achieved throughout the 2013-2014 monitoring period.

Fletcher Concrete

The Fletcher Concrete site at Stratford was generally well managed. The ponds in the concrete truck washing area were well managed and appeared to be operating effectively. Soak holes had been maintained. Overall a high level of both environmental and administrative performance and compliance was achieved throughout the 2013-2014 monitoring period.

3.2 Environmental effects of exercise of consents

During the 2013-2014 monitoring period there were no significant effects to the environment from any of the sites. There was no discharge from the settling ponds during inspections at Allied Concrete. There appeared to have been some small discharges occurring from soak holes at the Fletcher Concrete site and Firth Industries Concrete site, however the discharges were clear and appeared to have had no effect on the receiving waters.

3.3 Evaluation of performance

A summary of each consent holder's compliance record for the year under review is set out in Tables 1-3.

Table 1 Summary of performance for Consent 1273-3 discharge treated washwater from a concrete batching plant (Allied Concrete Waitara)

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Maintain and operate silt control system	Inspections of site	N/A
2. Mixing zone and effects of receiving water	Inspections of site	N/A
3. Concentration limits	Sampling-No sampling undertaken as no discharge occurring during site inspection	Yes
4. Review conditions of consent	N/A – Consent expires 2015	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
Overall assessment of environmental performance and compliance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

Table 2 Summary of performance for Consent 1274-3 discharge wastewater from a concrete batching plant (Firth Industries, Hawera)

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Best practicable option	Inspections of the site and systems	Yes
2. Discharge volume limit	Inspection of the site – Not discharging during inspection	Yes
3. Washwater to be directed for treatment prior to discharge	Inspections of the site	Yes
4. Maintain silt and sediment system	Inspections of site and records	Yes
5. Concentration limits	Sampling – No samples taken as no discharge was occurring during inspection	Yes
6. Mixing zone effects	Inspections of site	Yes
7. Optional review of conditions	Next optional review date June 2016	N/A
Overall assessment of environmental performance and compliance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

Table 3 Summary of performance for consent 5026-2 discharge of stormwater and wastewater from a concrete manufacturing and storage site (Fletcher Concrete, Stratford)

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Best practicable option	Inspection of site	Yes
2. Maximum catchment area	Inspection of site	Yes
3. Discharge volume limit	Inspection of site and system	Yes
4. System in accordance with info supplied in application	Inspection of site	Yes
5. Hazardous substances storage bunded	Inspection of site	Yes
6. Range pH – 6.9-9.0	Sampling – No sampling undertaken as discharge was clear and causing no discolouration in receiving water	N/A
7. Concentration limits	Sampling – No sampling undertaken as discharge was clear and causing no discolouration in receiving water	N/A
8. Mixing zone effects	Inspections of site, sampling- no sampling undertaken	N/A
9. Contingency planning	Plan received	Yes
10. Stormwater management plan	Plan received	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
11. Notification of any changes to processes	No changes	N/A
12. Consent lapse	N/A	N/A
13. Optional review of conditions	Next Optional review date June 2016	N/A
Overall assessment of environmental performance and compliance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

During the year, the companies demonstrated a high level of both environmental performance and administrative compliance with the resource consents as defined in Section 1.1.4. During the year under review there were no unauthorised incidents or complaints received regarding operations at the concrete batching plants. All sites appeared to be well managed and tidy.

3.4 Recommendations from the 2012-2013 Annual Report

In the 2012-2013 Annual Report, it was recommended:

1. THAT monitoring of discharges from Firth Industries in the 2013-2014 year continue at the same level as in 2012-2013.
2. THAT monitoring of discharges from Allied Concrete in the 2013-2014 year continue at the same level as in 2012-2013.
3. THAT monitoring of discharges from Fletcher Concrete in the 2013-2014 year continue at the same level as in 2012-2013.

These recommendations were implemented during the year under review.

3.5 Alterations to monitoring programmes for 2014-2015

In designing and implementing the monitoring programmes for air/water discharges in the region, the Taranaki Regional Council has taken into account the extent of information made available by previous authorities, its relevance under the Resource Management Act, the obligations of the Act in terms of monitoring emissions/discharges and effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki emitting to the atmosphere/discharging to the environment.

It is recommended that the 2014-2015 monitoring programme for the Concrete Batching Plants remains unchanged from the 2013-2014 monitoring programme.

Recommendations to this effect are attached to this report in Section 4.

4. Recommendations

1. THAT monitoring of discharges from Firth Industries in the 2014-2015 year continue at the same level as in 2013-2014.
2. THAT monitoring of discharges from Allied Concrete in the 2014-2015 year continue at the same level as in 2013-2014.
3. THAT monitoring of discharges from Fletcher Concrete in the 2014-2015 year continue at the same level as in 2013-2014.

Glossary of common terms and abbreviations

The following abbreviations and terms may be used within this report:

Bund	A wall around a tank to contain its contents in the case of a leak.
Incident	An event that is alleged or is found to have occurred that may have actual or potential environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically mean such an outcome had actually occurred.
Intervention	Action/s taken by Council to instruct or direct actions be taken to avoid or reduce the likelihood of an incident occurring.
Investigation	Action taken by Council to establish what were the circumstances/events surrounding an incident including any allegations of an incident
l/s	Litres per second.
MCI	Macroinvertebrate community index; a numerical indication of the state of biological life in a stream that takes into account the sensitivity of the taxa present to organic pollution in stony habitats.
Mixing zone	The zone below a discharge point where the discharge is not fully mixed with the receiving environment. For a stream, conventionally taken as a length equivalent to 7 times the width of the stream at the discharge point.
pH	A numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a pH of 4 is ten times more acidic than a pH of 5.
Resource consent	Refer Section 87 of the RMA. Resource consents include land use consents (refer Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits (Section 14) and discharge permits (Section 15).
RMA	Resource Management Act 1991 and including all subsequent amendments.
UI	Unauthorised Incident.
UIR	Unauthorised Incident Register – contains a list of events recorded by the Council on the basis that they may have the potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan.

For further information on analytical methods, contact the Council's laboratory.

Bibliography and references

Taranaki Regional Council, 2013: 'Concrete Batching Plants Monitoring Programme Annual Report 2012-2013', Taranaki Regional Council Technical Report 2013-10.

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Taranaki Regional Council, 2011: 'Concrete Batching Plants Monitoring Programme Annual Report 2010-2011', Taranaki Regional Council Technical Report 2011-97.

Taranaki Regional Council, 2010: 'Concrete Batching Plants Monitoring Programme Annual Report 2009-2010', Taranaki Regional Council Technical Report 2010-101.

Taranaki Regional Council, 2009: 'Concrete Batching Plants Monitoring Programme Annual Report 2008-2009', Taranaki Regional Council Technical Report 2009-109.

Taranaki Regional Council, 2008: 'Concrete Batching Plants Monitoring Programme Annual Report 2007-2008', Taranaki Regional Council Technical Report 2008-25.

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Appendix I

Resource consents held by Firth Industries, Allied Concrete, and Fletcher Concrete and Infrastructure Limited



Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTH ROAD
STRATFORD
NEW ZEALAND
PHONE: 06-765 7127
FAX: 06-765 5097
www.trc.govt.nz

Please quote our file number
on all correspondence

Name of Consent Holder:	Firth Industries (Division of Fletcher Concrete & Infrastructure Limited) P O Box 99904 Newmarket AUCKLAND 1149
Consent Granted Date:	14 July 2010

Conditions of Consent

Consent Granted:	To discharge treated wastewater from a concrete batching plant via settling ponds onto and into land and into an unnamed tributary of the Tawhiti Stream in the Tangahoe catchment at or about (NZTM) 1710199E-5617961N
Expiry Date:	1 June 2028
Review Date(s):	June 2016, June 2022
Site Location:	Glover Road, Hawera
Legal Description:	Site location: Lot 2 DP 17199 Blk V Hawera SD Discharge point: Lot 1 DP 19937
Catchment:	Tangahoe
Tributary:	Tawhiti

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General condition

- a. The consent holder shall pay to the Taranaki Regional Council [the Council] all the administration, monitoring and supervision costs of this consent, fixed in accordance to section 36 of the Resource Management Act.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The discharge shall not exceed a total volume of 2 cubic metres per day.
3. All wash water shall be directed for treatment through the sediment retention pond system prior to discharge from the site.
4. The consent holder shall maintain the sediment retention pond system, including regular removal of the sediment accumulated in ponds, to ensure adequate retention time for the discharge to meet the special conditions 5 and 6 of this consent.
5. Constituents of the discharge shall meet the standards shown in the following table.

<u>Constituent</u>	<u>Standard</u>
suspended solids	Concentration not greater than 200 gm ⁻³
oil and grease	Concentration not greater than 15 gm ⁻³

This condition shall apply before entry of the treated wash water into the receiving waters at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

6. After allowing for reasonable mixing, within a mixing zone extending 25 metres downstream of the discharge point, the discharge shall not give rise to any or all of the following effects in the receiving water:
 - a) an increase of pH by more than 0.5 pH units;
 - b) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - c) any conspicuous change in colour or visual clarity;
 - d) any emission of objectionable odour;
 - e) the rendering of fresh water unsuitable for consumption by farm animals;
 - f) any significant adverse effects on aquatic life.

7. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2016 and/or June 2022 for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 14 July 2010

For and on behalf of
Taranaki Regional Council


M. McLeay
Director-Resource Management



Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTH ROAD
STRATFORD
NEW ZEALAND
PHONE: 06-765 7127
FAX: 06-765 5097
www.trc.govt.nz

Please quote our file number
on all correspondence

Name of Consent Holder: Fletcher Concrete & Infrastructure Limited
Private Bag 99904
Newmarket
AUCKLAND

Consent Granted Date: 7 May 2009

Conditions of Consent

Consent Granted: To discharge stormwater and wastewater from a concrete product manufacturing and storage site onto and into land and into an unnamed tributary of the Kahouri Stream in the Patea catchment at or about (NZTM) 1710131E-5646578N

Expiry Date: 1 June 2028

Review Date(s): June 2016, June 2022 and/or within 3 months of receiving notification under special condition 11

Site Location: 3524 Mountain Road, Stratford

Legal Description: Lots 1 & 2 DP 6111 Lot 1 DP 5823 Blk I Ngaere SD

Catchment: Patea

Tributary: Kahouri

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

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Doc# 604406-v1

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The stormwater discharged shall be from a catchment area not exceeding 13,700 m².
3. The discharge of wastewater shall not exceed 5 m³/day.
4. The wastewater and stormwater system shall be as indicated in the drawings provided with application 6133 titled *Fletcher Concrete and Infrastructure Ltd Stratford Site Mountain Road (SH3) S1-00, S1-01, S1-02, S1-03, and S1-03 Diagram 1*.
5. Any above ground hazardous substances storage areas shall be bunded with drainage to sumps, or other appropriate recovery systems, and not directly to the stormwater catchment.
6. After allowing for reasonable mixing, within a mixing zone extending 25 metres downstream of the discharge point, the discharge shall not, either by itself or in combination with other discharges, give rise to a pH level in the receiving waters outside of the range 6.0-9.0.
7. Constituents of the discharge shall meet the standards shown in the following table.

<u>Constituent</u>	<u>Standard</u>
suspended solids	Concentration not greater than 100 gm ⁻³
total recoverable hydrocarbons	Concentration not greater than 15 gm ⁻³ [as determined by infrared spectroscopic technique]
Chloride	Concentration not greater than 50 gm ⁻³

This condition shall apply before entry of the treated stormwater into the receiving waters at a designated sampling point approved by the Chief Executive, Taranaki Regional Council.

8. After allowing for reasonable mixing, within a mixing zone extending 25 metres downstream of the discharge point, the discharge shall not, either by itself or in combination with other discharges, give rise to any or all of the following effects in the receiving water:
 - a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in the colour or visual clarity;
 - c) any emission of objectionable odour;
 - d) the rendering of fresh water unsuitable for consumption by farm animals;
 - e) any significant adverse effects on aquatic life.
9. The consent holder shall maintain a contingency plan. The contingency plan shall be adhered to in the event of a spill or emergency and shall, to the satisfaction of the Chief Executive, Taranaki Regional Council, detail measures and procedures to be undertaken to prevent spillage or accidental discharge of contaminants not authorised by this consent and measures to avoid, remedy or mitigate the environmental effects of such a spillage or discharge.
10. The consent holder shall maintain a stormwater management plan. This plan shall be adhered to at all times and shall, to the satisfaction of the Chief Executive, Taranaki Regional Council document how the site is to be managed in order to minimise the contaminants that become entrained in the stormwater. The plan shall include but not necessarily be limited to:
 - a) the loading and unloading of materials;
 - b) maintenance of conveyance systems;
 - c) general housekeeping; and
 - d) management of the interceptor system.
11. The consent holder shall notify the Chief Executive, Taranaki Regional Council, prior to making any changes to the processes or operations undertaken at the site, or the chemicals used or stored on site, that could alter the nature of the discharge. Any such change shall then only occur following receipt of any necessary approval under the Resource Management Act. Notification shall include the consent number, a brief description of the activity consented and an assessment of the environmental effects of any changes, and be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable if the consent holder does not have access to email.
12. This consent shall lapse on 30 June 2014, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

Consent 5026-2

13. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review:

- a) during the month of June 2016 and/or June 2022; and/or
- b) within 3 months of receiving a notification under special condition 11 above;

for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 7 May 2009

For and on behalf of
Taranaki Regional Council



The image shows a handwritten signature in black ink, appearing to read "R. M. Mole". Below the signature, the text "Director-Resource Management" is printed in a standard font.